

REMARKS

[01] The Office Action rejects most of the pending claims for anticipation by U.S. Patent Application Publication No. 2002/0001803 by Smith and Gordon, "Smith" herein. Smith discloses a method in which agitation is about an axis along (or "parallel to") a centrifugal force. The present amendment leaves only claims that require an agitation axis more orthogonal than parallel to a centrifugal force. Accordingly, Smith does not anticipate the claims. It is further noted that the "removing" called for by Claim 14 does not apply to Smith, since the agitation axis should be orthogonal to the centrifugal force to reverse the affect on the sample liquid. Accordingly, the rejections for anticipation are overcome.

[02] The Office Action rejects Claim 8 as being obvious given U.S. Patent No. 5,380,662 to Robbins et al., "Robbins" herein. This rejection is traversed.

[03] Robbins discloses an apparatus that provides a rotisserie action on sample tubes to promote uniform heating within an incorporating oven. Each tube can contain a sample in the form of a blot of nucleic acid on a membrane and a probe fluid. The apparatus provides a single axis of rotation that provides for both rotation and agitation. There is no axis of agitation distinct from the rotation axis involved in the rotisserie motion.

[04] Claim 8 requires introducing sample liquid into a reaction cell. Robbins discloses a probe liquid, but not a sample liquid. In this context, the probe and sample are functional opposites so the claimed sample liquid cannot read on Robbins probe liquid.

[05] Claim 8 requires the reaction cell to be partially filled with air. Robbins does not disclose any air in the cell. Despite assertions to the contrary, there are no indications in FIGS. 3 and 4 of Robbins of any air in the tube.

[06] Claim 8 requires a reaction cell having a hybridization array. Robbins discloses a tube with a sample nucleic acid blot on a membrane. The blot is not an array, so Robbins does not disclose the array recited in Claim 8.

[07] Claim 8 requires centrifuging a sample liquid so that centrifugal forces in excess of 1G urge sample liquid against a probe array. Robbins does not disclose forces in excess of 1G. Robbins does disclose a rotisserie motion, but does not indicate the centrifugal force generated thereby. However, it is not inherent in a rotation motion that it produces centrifugal forces in excess of 1G. The term "rotisserie" suggests a relatively slow rotation incapable of producing centrifugal forces in excess of 1G. Robbins does not disclose that the rotisserie motion urges sample fluid or probe fluid against an array or a blot.

[08] Claim 8 requires agitating a sample fluid so that it moves relative to a probe array. Again, Robbins does not disclose a sample fluid or a probe array.

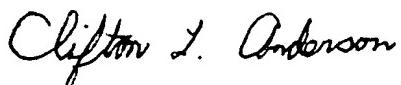
[09] Accordingly, Claim 8 includes several limitations that are not disclosed, inherent, or even suggested by Robbins. Accordingly, the rejection of Claim 8 for obviousness in view of Robbins should be withdrawn. These same arguments apply to the rejections of dependent claims 10-13 and 15.

[10] In view of the amendments, the double-patenting rejections should be reconsidered. Neither of the applications cited 09/729.169 nor 09/900,294 discloses or suggests the orthogonality limitation or the 1G limitation. In fact, '169 does not even appear pertinent (is this the right serial number?). The '294 application does not use centrifugal force to urge fluid against an array of hybridization probes and does not use an agitation axis orthogonal to the centrifugal force for mixing. Accordingly, the double-patenting rejections should be withdrawn.

[11] CONCLUSION

The claims have been amended to overcome the rejections for anticipation, obviousness, and double patenting. Accordingly, it is respectfully submitted that the application is in condition for allowance, which allowance is respectfully requested.

Respectfully submitted



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